SECTION 5. TROUBLESHOOTING

5-1. INTRODUCTION

This section provides troubleshooting information in the form of an easy-to-read table.

If a problem occurs during the first operation of a new fryer, recheck the installation per Section 2 of this manual.

Before troubleshooting, always recheck the operating procedure per Section 3 of this manual.

5-2. TROUBLESHOOTING

In the event of a control system failure, the digital display will show an "Error Message." These messages are coded: E5, E4, E6, E10, E15, E41, E50, E51, and E53.

DISPLAY	CAUSE	PANEL BOARD CORRECTION
E5	Shortening Overheating	Turn switch to OFF position, then turn switch back to ON. If display shows E5, the heating circuits and temperature probe should be checked.
E4	Control Board Overheating	Turn switch to OFF position, then turn switch back to ON. If display shows E4, the control board is getting too hot. Check the louvers on each side of the unit for obstuctions. If E4 persists, replace control panel.
E6	Thermal Sensor Failure	Turn switch to OFF position, then turn switch back to ON. If display shows E6, thermal sensor must be replaced. Refer to section 6-4.
E10	High Limit Failure	Reset high limit by manually pushing up on the red reset button. If high limit does not reset, high limit must be replaced per section 6-5, or 6-6.
E15	Drain Switch Failure	Close drain, using the drain valve handle. If display still shows E15 check drain valve section 6-13.
E41, E50, E51, E53	Programming Failure	Turn switch to OFF, then back to ON. If display shows any of the error codes, the control panel needs replaced.

5-2. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	POWER CORRECTION
With switch in POWER position and switch light not illuminated, fryer is completely inoperative.	Open Circuit	• Check to see if unit is plugged in. • Check breaker or fuse at supply box. • Check control panel fuse per Section 6-12. • Check POWER switch per Section 6-14. Replace if defective. • Check voltage at wall receptacle. • Check cord and plug.
With switch in power position, switch light is on, but all other lights are out except the pump will operate.	No power to board	• Check fuse on PC board.
Shortening will not heat but lights are on.	Faulty Contactor (elec. model)	• Check contactor per Section 6-8.
	Faulty Gas Valve (gas model)	• Check gas valve per Section 6-11.
	Faulty Gas Solenoid (gas model)	• Check gas solenoid, per Section 6-19.
	Faulty Probe	• Check probe per Section 6-4. "Error message" E6.
	Faulty High Limit	• Check High Limit per Section 6-6, or 6-7. "Error message" E10.
	Faulty Drain Switch	• Check drain switch per Section 6-13. "Error message" E15.

5-2. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	POWER CORRECTION
Shortening will not heat, but lights are on.	Faulty Contactor (elec. model)	• Check contactor per Section 6-8.
	Faulty Thermal Sensor	• Check thermal sensor per Section 6-4. "Error message" E6.
	Faulty High Limit	• Check high limit control switch per Section 6-6 or 6-7.
A. Pilot will not light (gas model)	Pilot not lit	• Light pilot per Section 2-9.
	Plugged pilot orifice, and/or pilot supply tube	• Unplug pilot orifice and/or pilot supply tube.
	Gas supply off	• Turn ON gas supply.
	Faulty gas control valve	• Replace gas control valve.
	Air in gas supply line	• Bleed air from supply line.
B. Pilot will not stay lit.	Faulty thermo couple	• Replace thermo couple per Section 6-10.
	Pilot magnetic plug	• Service per Section 6-11.
C. Burner will not light, pilot lit (gas model)	Drain valve open	• Close drain valve.
	High Limit control switch open	• With power removed from fryer, check across high limit switch terminals with ohmmeter. Replace if no reading is indicated on meter.
	Possible faulty gas control valve	• With power removed from fryer, check across electrical leads of gas control valve with ohmmeter, and gas valve in "ON" position. Ohm reading should be 234 ohm resistance. Replace the control valve if not within 10%.

5-2. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	POWER CORRECTION
Heating of shortening too slow	Low or improper voltage (elec. model)	• Use a meter and check the receptacle against data plate.
	Weak or burnt out elements (elec. model)	• Check heating elements per section (elec. model).
Heating of shortening too slow (elec. model)	Points in contactor bad (elec. model)	• Check contactor per Section 6-8.
	Wire(s) loose	• Tighten
	Burnt or charred wire connection	• Replace wire and clean connectors.
	Supply line too small - low gas volume (gas model)	• Increase supply line size. Refer to installation instructions.
	Incorrect jet size (gas model)	• Replace with proper size jet for type of gas.
	Improper ventilation system (gas model)	• Refer to Section 2-5.
Shortening overheating	Check probe calibration	• Calibrate probe if ±10°F or °C off. If more than ±10°F or °C, replace probe.
	Check contactor for not opening (elec. model)	
	Bad Controller	• Replace control board if heat indicator stays on past ready temperature.

5-2. TROUBLESHOOTING (Continued)

PROBLEM	CAUSE	POWER CORRECTION
Foaming or boiling over of shortening.	Water in shortening	• At end of frying cycle, drain shortening and clean frypot. Add fresh shortening.
	Improper or bad shortening	• Use recommended shortening.
	Improper filtering	• Refer to the procedure covering filtering the shortening.
	Improper rinsing after cleaning the fryer	• Clean and rinse the frypot. Then dry thoroughly.
Shortening will not drain from frypot	Drain valve clogged with crumbs	• Open valve force cleaning brush through drain opening.
	Drain valve will not open by turning handle	• Replace cotler pins in in valve capling.
Filter motor runs but pumps shortening slowly	Filter valve not open	• Open filter valve.
	Pump clogged	• Remove and clean pump per Section 6-15.
	Filter line connection loose	• Tighten all filter line connections.
	Solidified shortening in lines	• Clear all filter lines of solidified shortening.
Filter switch ON, motor does not run	Defective switch	• Check/replace switch per Section 6-15.
	Defective motor	• Check/replace motor per Section 6-15.
	Motor thermal protector tripped	• Reset thermal switch per Section 3-7.
Motor hums but will not pump	Clogged lines or pump	• Remove and clean pump and lines. • Replace pump seal, rotor and rollers per 6-15.